

**REMARKS**

Before considering the specific rejections raised by the Examiner, Applicant notes the promised full translation of JP '991 does not appear ever to have been provided.

Claim 1 has been amended to better define the claimed invention and to better distinguish the claimed invention from the prior art, as well as to address the various 35 U.S.C. § 112 rejections. No new matter has been added.

Considering the rejection of claims 1, 5-11, 14-33, 36 and 37 under § 112, first paragraph, the Examiner states that “[t]here is no clear disclosure of electrical circuitry being specifically provided between an illuminator layer and a protective surface . . . .” As amended, claim 1 does not require the electrical circuitry to be provided in any specific order within the device, but instead requires that “electrical circuitry connects the battery layer, the photovoltaic layer and the illuminator layer.” Support for this amendment can be found at p. 6, lines 3-5 of Applicant’s originally filed specification, which states that “[e]lectrical connections in a preferred embodiment would be made during the lamination process with circuitry that is printed, etched or plated on a laminate film or layer that corresponds with the electrode connections for each layer.” Thus, Applicant’s invention contemplates electrical circuitry forming multiple electrical connections between various layers of the device. That is, the electrical circuitry is not a single discrete layer within Applicant’s device, and the amendment to claim 1 reflects this.

In response to the Examiner’s statement that “there is no support for the limitation ‘whereby to selectively charge the battery and/or power the illuminator’”, claim 1 has been amended to specify “to selectively charge the battery and/or charge the battery and power the illuminator”. Support is found in Figs. 2 and 4 of the original application.

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Thus, it is respectfully submitted that independent claim 1, as well as the several claims dependent thereon, complies with the provisions of 35 U.S.C. § 112, first paragraph, and withdrawal of the § 112, first paragraph rejection is respectfully requested.

Turning to the rejection of claims 1, 5-11, 14-33, 36 and 37 under 35 U.S.C. § 112, second paragraph, claim 1 has been amended to read, in part, “wherein an adhesive having a removable covering is applied to said protective surface or base sealing layer.” As such, it is respectfully asserted that amended claim 1 overcomes the Examiner’s objection that “[t]he phrasing of the claim makes it unclear whether the adhesive, removable covering, or other layers are required to be provided in the claimed order, or whether different sequences are contemplated.” It is further submitted that the Examiner’s objection to the language of “electrical circuit” is overcome by the amendment to claim 1, as discussed above in respect to the § 112, first paragraph rejection over the same language. Accordingly, withdrawal of the § 112, second paragraph rejection is respectfully requested.

Turning to the art rejections and considering first the rejection of claims 1, 5-11, 14-33, 36 and 37 under 35 U.S.C. § 103(a) as being unpatentable over Murasko et al. (US 2002/0159245; hereinafter “Murasko ‘245”) in view of Yamamura (JP 62-106671), Murasko (US 2001/0035716; hereinafter “Murasko ‘716”), Murasko (US 6,203,391; hereinafter “Murasko ‘391”), Curtin (US 6,160,215), and Kakinote et al. (JP 59-217991), independent claim 1 requires:

A fully contained solar powered laminated electrical tape illumination device comprising a plurality of flexible layers in stacked order including a flexible base sealing layer, a flexible thin film battery layer, a flexible thin film photovoltaic layer to produce electricity, an illuminator layer, and a protective surface, wherein an adhesive having a removable covering is applied to said protective surface or base sealing layer, wherein all of the aforesaid layers are flexible and the assembled laminated device is also flexible, and wherein

electrical circuitry connects the battery layer, the photovoltaic layer and the illuminator layer whereby to selectively charge the battery and/or power the illuminator.

It is respectfully submitted that no combination of the above-cited references can render obvious Applicant's independent claim 1, or any of the several claims dependent thereon.

In the Office Action, the Examiner cites Murasko '245 as teaching "stacked layers including . . . a photocell . . . [and] a device 204, such as a thin film battery . . . ." However, it is respectfully submitted that Murasko '245 does not teach stacked layers as described in the Office Action. Instead, Murasko '245 merely teaches a power supply (204), a light emitting device (206) and a photocell (208) formed adjacent to each other on a surface of a substrate. *See, e.g.*, Murasko '245 [0024]-[0025]. Thus, Murasko in no way teaches "stacked layers," as required by Applicant's independent claim 1, but merely teaches a surface of a substrate having a power supply, a light emitting device and a photocell all formed on a plane with each other. As such, Murasko '245 has limited surface area of photocell exposure, as well as limited surface area for providing lighting. In contrast, Applicant's claimed invention specifies that the thin film photovoltaic layer, the thin film battery layer, and the illuminator are each separate layers. Thus, in a given surface area, Applicant's claimed invention maximizes the light capturing area of the photovoltaic layer, the area of the thin film battery layer, and the illumination area of the illumination layer. Accordingly, Applicant's invention enjoys significant improved efficiency as compared to Murasko '245. Each of the additional references cited in the Office Action, alone or in any combination, fails to provide the missing teachings necessary to render obvious Applicant's independent claim 1.

The Examiner cites Curtin as teaching an adhesive layer over an outer protective surface and a removable backing over a clear adhesive layer that allows the cell to be affixed to

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any desired substrate. However, Curtin clearly fails to provide any teaching of “flexible layers in stacked order including a flexible base sealing layer, a flexible thin film battery layer, a flexible thin film photovoltaic layer to produce electricity, an illuminator layer, and a protective surface,” as required by independent claim 1.

Moreover, Curtin fails to teach “an adhesive having a removable covering is applied to said protective surface or base sealing layer,” as required by Applicant’s claim 1. In fact, Curtin completely fails to teach or suggest a protective surface or base sealing layer, or that his adhesive could be applied to a protective surface or base sealing layer. Rather, Curtin teaches adherence of a “contact transfer release sheet” directly onto the sheet of thin film cells and conductive foil tape. *See*, Curtin, Col. 2, lines 17-27; Col. 4, lines 6-19. Curtin is merely concerned with providing for compact packaging and transport of photovoltaic cells by providing a sheet of photovoltaic cells to be shipped separately from glass, framing, and other heavy support medium thus reducing the weight and therefore cost of shipping, and also reducing manufacturing costs by eliminating the need to encase the photovoltaic cells in plastic. Col. 2, lines 44-56. Furthermore, it is respectfully submitted that one having skill in the art would not look to combine Murasko ‘245 with Curtin for any reason because Murasko ‘245 is a fully contained device while Curtin is an incomplete device (merely a photovoltaic cell) designed to be mounted to a substrate and connected via tabs or the like to complete a circuit.

The Examiner cites Murasko ‘716 as teaching an electroluminescent device that is flexible. However, Murasko ‘716 fails to teach or suggest, alone or in any combination with the cited references, “flexible layers in stacked order including a flexible base sealing layer, a flexible thin film battery layer, a flexible thin film photovoltaic layer to produce electricity, an illuminator layer, and a protective surface,” as required by independent claim 1. No stacked

order is contemplated in any manner by Murasko '716. Murasko '716 simply teaches a single electroluminescent device that may be flexible. Similarly, Murasko '391 fails to teach or suggest any of the requirements of claim 1. Murasko '391 is cited as teaching flexible substrates for electroluminescent devices. However, Murasko '391 fails to teach or suggest any stacked order with other layers, as required by claim 1. That is, Murasko '391 fails to teach or suggest a flexible thin film battery layer, a flexible thin film photovoltaic layer, or any of the other layers required by claim 1.

Yamamura similarly fails to provide the missing teachings necessary to render obvious Applicant's independent claim 1, or any of the claims dependent thereon. The Examiner cites Yamamura as teaching a reduction in the number of parts of a laminated solar battery device by disposing a charged storage device (a capacitor) on the non-light receiving surface of a thin film solar cell assembly. However, Yamamura fails to teach or suggest "flexible layers in stacked order including a flexible base sealing layer, a flexible thin film battery layer, a flexible thin film photovoltaic layer to produce electricity, an illuminator layer, and a protective surface," as required by independent claim 1. Instead, Yamamura simply teaches laminating a solar battery and a capacitor on a substrate, thereby reducing the need for an externally connected capacitor. Moreover, Yamamura fails to teach or suggest that the device may be flexible. As noted on page 3 of Applicant's specification, the requisite flexibility of the layers permits Applicant to take advantage of large volume manufacturing processes such as roll-to-roll lamination or sheet lamination techniques, thus providing Applicant with an economic advantage. This also permits Applicant to apply the device directly from a roll, which also is economically advantageous. Yamamura provides no teaching whatsoever of flexible layers. Indeed, if Yamamura were made flexible the spacing between the elements forming the

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capacitor would vary if the product were to flex, thus producing an ineffective capacitor that potentially could cause significant circuit damage as the device would discharge or short upon flexing. Thus, any combination of the cited references with Yamamura would result in a device inoperable for its intended use.

Finally, the Examiner relies on the newly cited Kakinote et al. as teaching a translucent illuminator (7) overlying a thin-film photovoltaic layer (11). However, Kakinote et al. fails to teach or suggest, alone or in any combination with the cited references, “flexible layers in stacked order including a flexible base sealing layer, a flexible thin film battery layer, a flexible thin film photovoltaic layer to produce electricity, an illuminator layer, and a protective surface,” as required by independent claim 1. Kakinote et al. does not teach flexible layers. Moreover, Kakinote et al. manifestly fails to teach a flexible thin film battery layer. In fact, Kakinote et al. relies upon an external battery (14) to store the generated power.

For at least the foregoing reasons it is respectfully submitted that no combination of the cited references can render obvious Applicant’s independent claim 1, or any of claims 5-11, 14-33, 36 and 37, each of which ultimately depend upon claim 1.

It is further submitted that the Examiner is employing impermissible hindsight and is cherry-picking teachings from seven (7) references to make out a case for obviousness for a product which itself only has seven elements. Such rejection clearly is based on hindsight.

The foregoing amendment makes no claim changes that would require further search by the Examiner. Rather, claim 1 has been amended to further clarify the claimed invention and address the various § 112 issues. Accordingly, entry of the foregoing Amendment, and allowance of the application are respectfully requested.

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Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Thus, entry of the Amendment, and allowance of the application are respectfully requested. Early and favorable action is respectfully requested.

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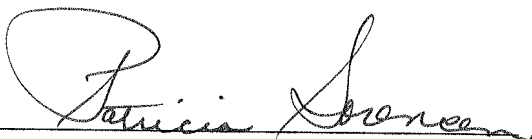
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Respectfully submitted,

  
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